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*The Story of Chestnut Extract*  
Illustrating the  
Resources of  
**The Champion Fibre Company**  
Canton  
North Carolina



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# *The* CHAMPION FIBRE COMPANY

CANTON, NORTH CAROLINA

MANUFACTURERS OF

## PURE CHESTNUT WOOD EXTRACT

*Liquid and Powdered*

Sole Manufacturers of

**BLUDTAN**

U. S. Pat. Office Trade Mark

Blood Decolorized Chestnut Extract

*Best Chestnut Extract in the World*

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# The Story of Chestnut Extract

By Robert W. Griffith



DECOCTIONS and infusions of vegetable matter in concentrated form, known as extracts, are of great antiquity, but the evolution which has brought about the use of tannin extracts is of comparatively recent origin. ¶ Up to less than a century ago tanners used roughly ground barks which they spread in even layers between raw hides in vats which were then filled with water. The extraction of the tannin from the bark, and its absorption by the hide, took place simultaneously. Obviously, the operation of the two processes was very slow, and the tanning of the hides occupied one to two years.





**Virgin Forest of Chestnut Wood.**  
Section of the Champion Fibre Company's timber lands.



So long did this old-fashioned method of tanning hides take that hides were sometimes laid away in vats and forgotten altogether, so that it has become a frequent occurrence, when excavating old tannery sites, to come across vats filled with leather.

The introduction of the system of leaching, now commonly employed in most tanneries, is within comparatively recent times. The process of leaching tanning materials may be said to mark the introduction of the use of tannin extract, although in a very weak form.

### **Extract a French Invention**

The manufacture of concentrated tannin extract, as it is known today, first originated in France in the early seventies, and was made from chestnut wood.





**Giants of the Forest.**

Fine specimens of chestnut trees on the timber lands of the  
Champion Fibre Company.



## **Chestnut Wood Extract**

The manufacture of tannin extract from chestnut wood brought a new material to the tanner, inasmuch as the wood itself was not sufficiently strong in tannin to permit of its use, hitherto, in the tannery direct, so that the production of chestnut extract first solved the problem of obtaining for the tanner a material possessing tannin in concentrated form, which presented many economies, both in the transportation of the material and in the loss of valuable tannin matters, resulting from inefficient methods of extraction by leaching in the tannery.

Chestnut wood extract had been in use for many years in Europe before the attention of the American tanner was attracted to it. In the production of heavy leather in Europe, chestnut wood extract forms the largest proportion of the tannage, and in the United States the value of chestnut wood





**Primitive  
Transportation  
in the Woods.**

Oxen hauling logs  
through places dif-  
ficult of access, on  
the timber lands  
of the Champion  
Fibre Company.

extract is becoming more recognized, so that it is finding a constantly increasing consumption. The principal characteristics of the tannin of chestnut wood extract are its quality of imparting firmness and solidity to leather, and its capacity to make weight.

### **Chestnut Extract in Europe**

While hemlock tanned leather may be said to have been the characteristic native American tannage, it has been forced to give way to chestnut wood extract in its popularity as a domestic tanning material; and since the war in Europe, American chestnut wood extract has been the salvation of many of the European tanners.

### **Percentage of Tannin**

American chestnut wood contains about the same percentage of tannin as the chestnut wood which grows in France. It varies from seven to eleven





**A Flume on  
the wood opera-  
tions of the  
Champion Fibre  
Company.**

The Company  
operates many  
miles of flumes.



per cent. in its tannin contents, but the color obtained from the extract of American chestnut wood is not as light as that from French chestnut wood, although American chestnut wood extract lends itself to the process of decolorizing equally as well as the French chestnut extract.

### **Chestnut Wood in U. S. A.**

The chestnut wood area of the United States may be said to occupy a region embracing the southwest of Virginia, western North Carolina, eastern Tennessee and western Georgia, an area of many hundreds of square miles, and one which is likely to yield an abundant supply of wood for many years to come.

The heart of the chestnut wood area of the United States is in western North Carolina, where, in the opinion of foresters, the best chestnut wood thrives, and it is in this section that the wood richest in tannin is obtained.





**Flume  
Terminus.**

Wood is brought  
by water trans-  
portation through  
miles of forest to  
the narrow-gauge  
railroad.



### **No Danger of Blight**

The conservation of the wood in this area is a matter of prime importance to the future supply of chestnut wood extract. The blight, which destroyed so many of the chestnut trees in the eastern parts of the country, fortunately never reached this area, and there is no immediate prospect of its doing so. The area, however, is not immune from the ravages of forest fires, but in the timberlands operated by the Champion Fibre Company, and other large lumber companies operating this section, the underbush is always cleared as the first precaution to be taken against fires, and this permits of the development of a second growth, which becomes available for cutting in about twenty-five years.

As the production of chestnut wood extract is dependent upon an abundant and uniform supply of wood, it is obvious that properly conducted wood





### **A Wood Operation in the Interior of the Forest.**

A winding engine hauling loaded cars of wood up a steep incline to the narrow-gauge railroad on the timber lands of the Champion Fibre Company.



operations for cutting the trees, splitting the wood, and transportation to the extract plant are matters of prime importance.

These wood operations involve engineering construction, and call for an investment of money, which is frequently overlooked in considering the erection of an extract plant.

### **Cutting and Seasoning**

After the chestnut tree is cut in the forest, it is sawed into logs which in turn are split into sections of a uniform length of five feet. This permits of the wood being stored in piles to undergo the process of seasoning which occupies several months. The seasoning of the wood has an important bearing upon the yield of tannin from the wood.

In one of the accompanying illustrations, a virgin forest, consisting mostly of chestnut trees, is seen. Some of these trees are two hundred years





**Forest Engineering.**  
Trestle on a narrow-gauge railroad on the timber lands of the  
Champion Fibre Company.



old. This is one section of the Champion Fibre Company's wood operations, which altogether cover an area of three hundred thousand acres, and are a considerable factor in the company's resources.

### **Forestry Conservation**

As the trees are cut down, the underbush is removed and the stumps encouraged to yield a second growth. The mountain land upon which these forests flourish is not arable, and therefore does not lend itself to the cultivation of crops, so that the land serves its best purpose to be permitted to foster the growth of chestnut trees.

### **Methods of Transportation**

Every available means of transportation, from the primitive oxen which haul the logs, to the more modern narrow-gauge railway, is employed for





**Wood train  
arriving at the  
storage yard.**

The Champion  
Fibre Company's  
wood operations.



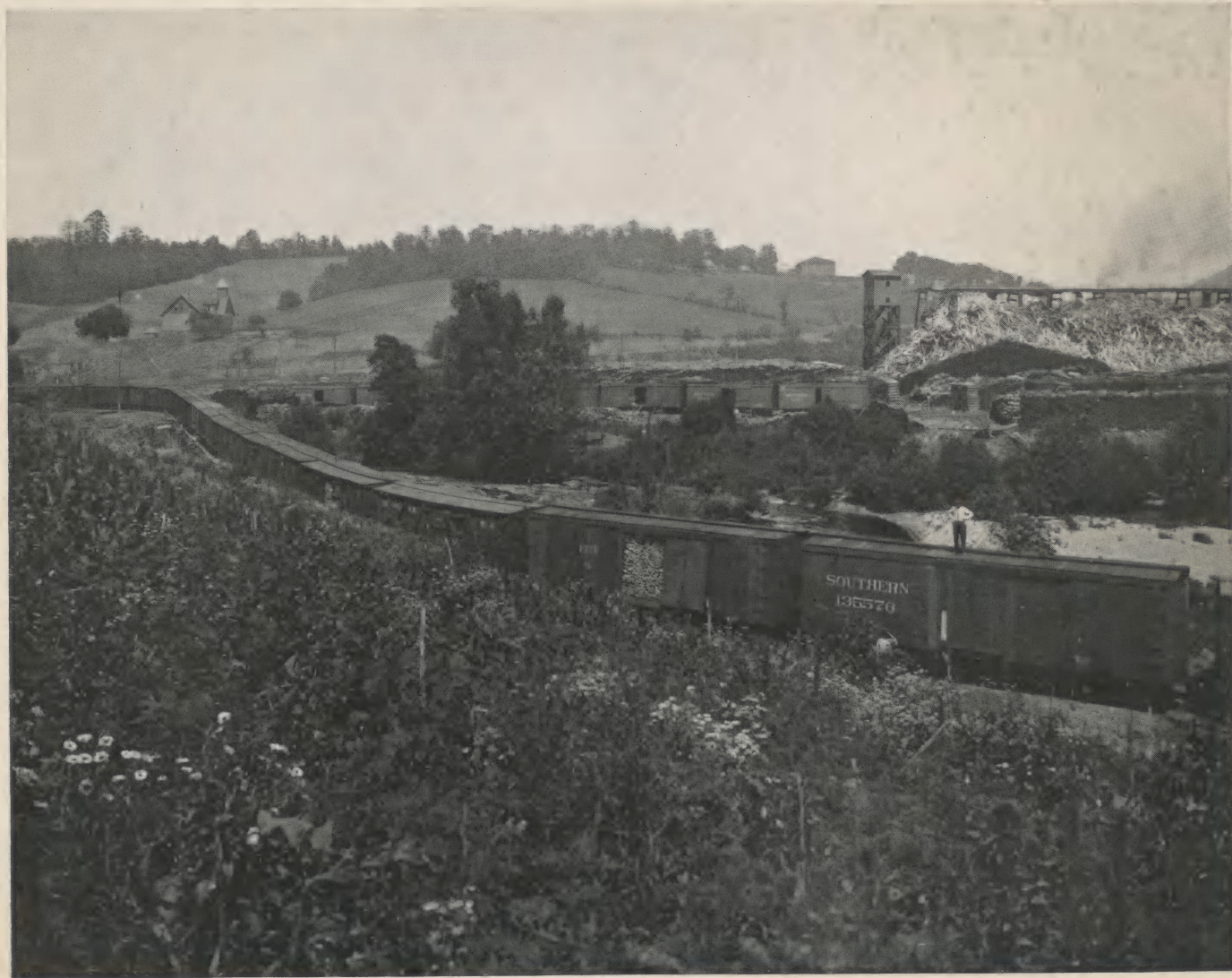
conveying chestnut wood from the interior of the forest to the main line of the railroad.

The flume, or water conveyor, is one of the best means of transporting wood over difficult ground, provided there are sufficient streams available to feed the flume with water.

On the wood operations of the Champion Fibre Company there are many miles of these flumes, as shown in the illustration. The construction of a flume involves an expenditure varying from \$600 to \$2,000 per mile, according to the nature of the ground over which it is to be operated.

The most satisfactory means of transportation for wood from the forest to the railroad main line is the narrow-gauge railway, although the initial cost of this means of transportation is much higher than any other. The cost of constructing a narrow-gauge railway varies from \$2,000 to \$5,000 per





**Train of thirty  
standard cars  
loaded with  
chestnut wood,**

Arriving at the  
Champion Fibre  
Company's Ex-  
tract Plant at  
Canton, N.C.—one  
day's supply of  
wood.



mile. To take the wood available for cutting out of any given area occupies from three to ten years, at the end of which time there is no further use for the narrow-gauge road, and it has to be abandoned, so that its construction cannot be regarded in the nature of a permanent investment.

Every form of transportation which involves engineering construction for bringing the wood out of the forest is from the nature of the circumstances of a temporary character, so that the expense involved in transporting wood from the forest to the extract plant is a large factor in the calculations of the extract manufacturer.

### **Large Storage Yards**

To provide for the production of a uniform quantity of extract, the manufacturer is obliged to maintain large storage yards for wood.

In the storage yards of the Champion Fibre Company there are upwards of sixty thousand cords, representing an investment of over \$400,000 in the





**Extract Plant of  
the Champion  
Fibre Company,  
Canton, N. C.**



value of the wood alone. This quantity represents a six months' supply of wood for a production of five hundred barrels of tannin extract per day, which is equivalent to 63,000 pounds of pure tannin.

It requires thirty standard railroad cars to convey the wood to the company's plant, necessary for one day's production of extract.

The extract plant of the Champion Fibre Company, shown in the accompanying illustration, is probably the best equipped plant in the world in the matter of resources for raw material and productive efficiency. The plant alone represents an investment of close to \$750,000, and its facilities for maintaining a uniform product, both in quality and quantity, are unsurpassed by any other plant in the world.





**Transportation  
of the finished  
product.**

A train of tank  
cars loaded with  
liquid Chestnut  
Extract.



*The* **CHAMPION FIBRE COMPANY**

CANTON, NORTH CAROLINA

MANUFACTURERS OF

**PURE CHESTNUT WOOD EXTRACT**

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Champion Fibre

C 65

Strip of chloretine

Subsidiary

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